

Purchasing Receipts

Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246



PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO041051	MES002-VC	1	1	Net 30	M1018S.250	M1018S.250 : AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W NO SCALE ON SHEET MINIMUM YIELD TENSILE STRENGTH= 28KSI MINIMUM ULTIMATE TENSILE STRENGTH= 42KSI COLD ROLLED receive sf				16	9/24/2018	16		S115006	Stock	9/28/2018	\$ 13.30 / sf	3		\$212.80	Metaux Solutions
		3			M304R0.750	304 SS Roundbar .750 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				12		12		S115007	Stock	9/28/2018	\$ 7.60 / ft	3		\$91.20	Metaux Solutions
		4			M6061T6B1.000X02.000	6061-T6 Bar 1.00 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft				48		48		S115008	Stock	9/28/2018	\$ 11.05 / ft	3		\$530.40	Metaux Solutions
		8			M6061T6B1.500X3.500	6061T6 Bar 1.500 X 3.500 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft				6	9/28/2018	6		S115009	Stock	9/28/2018	\$ 44.45 / ft	3		\$266.70	Metaux Solutions
		9			M6061T6S.080	6061-T6 .080 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf				96		96		S114804	Stock	9/28/2018	\$ 10.90 / sf	3		\$1,046.40	Metaux Solutions

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name	
		10			M304B0.375X03.000	M304 SS bar .375 x 3.00 : MATERIAL: AISI 304/316 SS BAR OR AISI 304/316 SS PLATE AS PER ASTM A276 OR ASTM A240 NOTE: AISI 303 NOT ACCEPTABLE receive ft				12		12		S115010	Stock	9/28/2018	\$ 21.10 / ft	3		\$253.20	Metaux Solutions	
		11			M304R0.375	304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				36		12		S115011	Stock	9/28/2018	\$ 2.75 / ft	3		\$33.00	Metaux Solutions	
		12			M303R0.750	303 Round Bar 0.750 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft				12		12		S115012	Stock	9/28/2018	\$ 7.86 / ft	3		\$94.32	Metaux Solutions	
Total:										238			214								\$1,976.60	

Plex 10/1/2018 3:46 PM dart.Tollis.Andrew



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041051**

Supplier: MES002-VC
Metaux Solutions
2625 boul Jacques-Cartier Est
Longueuil
QC
J4N 1L7 Canada
Phone: 800 558 8858
Fax: 514 633 8044

PO No: PO041051

PO Date: 9/18/18

Due Date: 9/24/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments: BID NO. 29032,29089, 29087

E-MAILED
SEP 19 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1 AT		M1018S.250	HP14	M1018S.250 : AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W NO SCALE ON SHEET MINIMUM YIELD TENSILE STRENGTH= 28KSI MINIMUM ULIMATE TENSILE STRENGTH= 42KSI COLD ROLLED receive sf	Firmed	-	9/24/18	16 sf	0 sf	16 sf	\$13.30/sf	\$212.80
2		MT-4140-S-0.750	MP3441H	AISI 4140 / 4142 Steel Sheet 0.750" : MATERIAL: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc AS PER ASTM A829, AMS 6395	Firmed	-	9/24/18	11.333 sf	0 sf	11 sf	\$113.65/sf	\$1,288.00
3 AT		M304R0.750	SR344	304 SS Roundbar .750 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/24/18	12 ft	0 ft	12 ft	\$7.60/ft	\$91.20



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041051**

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4		M6061T6B1.000X02.000	AF12	6061-T6 Bar 1.00 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	9/24/18	48 ft	0 ft	48 ft	\$11.05/ft	\$530.40
5		MT-4140-S-1.500X3.000	MP11241H	4140 Steel Bar 1.500 X 3.000 : AISI 4140N STEEL SHEET OR PLATE AS PER ASTM A829 OR AMS 6395 MIN: ROCKWELL C = 28 RC MAX: ROCKWELL C = 32 RC receive ft	Firmed	-	9/24/18	4 ft	0 ft	4 ft	\$49.30/ft	\$197.20
6		MT-4140-S-2.000X6.000	MP241H	4140 Steel Plate 2.000" X 6.000" : AISI 4140N STEEL SHEET OR PLATE AS PER ASTM A829 OR AMS 6395 MIN: ROCKWELL C = 28 RC MAX: ROCKWELL C = 32 RC	Firmed	-	9/24/18	4 ft	0 ft	4 ft	\$126.15/ft	\$504.60
7		MT-4140-S-1.250X2.125	MP11441H	AISI 4140 / 4142 Steel Plate 1.250" X 2.125" : AISI 4140N STEEL SHEET OR PLATE AS PER ASTM A829 OR AMS 6395 MIN: ROCKWELL C = 28 RC MAX: ROCKWELL C = 32 RC	Firmed	-	9/28/18	6 ft	0 ft	6 ft	\$30.45/ft	\$182.70
8		M6061T6B1.500X3.500	AF112312	6061T6 Bar 1.500 X 3.500 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	9/28/18	6 ft	0 ft	6 ft	\$44.45/ft	\$266.70



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Hawkesbury, ON
K6A 1K7
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PURCHASE ORDER **PO041051**

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
9 AT		M6061T6S.080	AS08061	6061-T6 .080 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf	Firmed	-	9/28/18	96 sf ✓ 96sf	0 sf	96 sf	\$10.90/sf	\$1,046.40
10 AT		M304B0.375X03.000		M304 SS bar .375 x 3.00 : MATERIAL: AISI 304/316 SS BAR OR AISI 304/316 SS PLATE AS PER ASTM A276 OR ASTM A240 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	12 ft ✓ 12ft	0 ft	12 ft	\$21.10/ft	\$253.20
11 AT		M304R0.375	SR384	304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	36 ft 12ft	0 ft	36 ft	\$2.75/ft	\$99.00
12 AT		M303R0.750	SR343	303 Round Bar 0.750 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: 304/316 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	12 ft ✓ 12ft	0 ft	12 ft	\$7.86/ft	\$94.32
13		M304B0.250x0.500		304 Bar .250 X .500 : MATERIAL: AISI 304/316 SS BAR OR AISI 304/316 SS PLATE AS PER ASTM A276 OR ASTM A240 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/24/18	500 pcs	0 pcs	500 pcs	\$4.0521/pcs	\$2,026.05
Grand Total:											\$6,792.57	

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 9/18/18 9:13 AM dart.lavoie.chantal

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7
Tel.: 450 641-3330

Shipping Order

26/09/2018

Order : 138217
Reference : 41051
Bid : 29089
Ship : PICK UP / PICK UP

Customer: 6323336

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Ship To

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
HP14	MS PLATE .250	16	16	0
	1 x 4' x 4' ✓			
	ht 154894 AT			
MP3441H	4140 HTSR TFA PLATE .750 THICK P.M	368	368	0
	1 x 33.75" x 48" ✓			
	ht 94790			
SR344	304 ROU .750 DIA	12	12	0
	1 X 12' R/L *****			
	HT644D AT			
AF12	ALU FLA 1.000 X 2.000 6061-T6 ✓	48	48	0
	4 X 12' ****			
	HT73242 AT			
MP11241H	4140 HTSR PLATE 1.5" THICK ✓	68	68	0
	1 X 3" X 48"			
	HT94739			
MP241H	4140 HTSR PLATE 2.035" THICK ✓	174	174	0
	1 X 6" X 48"			
	HT944960			
MP11441H	4140 HTSR PLATE 1.250" THICK ✓	63	63	0

*** Continued on Next Page ***

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7 **Tel. : 450 641-3330**

Shipping Order 26/09/2018

Order : 138217
Reference : 41051
Bid : 29089
Ship : PICK UP / PICK UP

Customer : 6323336

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Ship To

Same

Tel. : 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
AF112312	1 X 2.125" X 72" HT(94492) ALUM. FLAT 1.5 X 3.5 6061-T6 ✓ 1 X 72" ***** / HT(200114141) AT	6	6	0
AS08061	ALU SHE .080 6061-T6 (12G) 2 X 4' X 12' / HT(427791) AT	96	96	0
SF3834	✓ 304 FLA .375 X 3.000 1 X 12' R/L / HT(15E7) AT	12	12	0
SR384	✓ 304 ROU .375 DIA 1 X 12' R/L / HT(1802AR4796) AT	12	12	0
SR343	✓ 303 ROU .750 DIA 1 X 12' R/L HT(819E) AT	12	12	0
SF14124HR	304 STAIN FLA .25" X .500" HR 40 X 13' R/L HT(67738108) LIVRE NOTRE CAMION JP	520	520	0

Page : 2

Shipping : _____

Package No : _____

Merchandise Received: _____

Ref. : _____

386141
-Sold To/Vendu A-

-Ship To/Expédier A-
COILEX - VARENNES
358 RUE JEAN COUTU, SUITE BOOR #1
VARENNES, QC.
J3X 0E1
CORNER DE L'ENERGIE/JEAN COUTU

-Spec/Norm et Spec-
PLATE-IN-COIL CONV. CSA G40.21-13 GR 58H (2013)
STANDARD THICKNESS TOLERANCE
TEST REPORTS REQUIRED

-Material Description/Description du Material-
PLATE-IN-COIL FOR CONVERSION
STRUCTURAL STEEL
COILS
MILL EDGE PLAIN DRY
.2360 MIN .2480 X 48 X COIL
HEIGHT: 44710 LBS
-Test Methods/Methods d'Essai-
ASTM A370, E1010, E415

HEAT	C	Mn	P	S	Si	Cu	Ni	Cr	Sn	Mo	Al	Alt	Cb	V	Ti	Ca	N	B	O
COULEE																			
154894	.00	.03	.01	.002	.05	.10	.03	.07	.004	.010	.034	.036	.046	.004	.016	.002	.0039	.0002	

MECHANICAL PROPERTIES/PROPRIETES MECANQUES

SERIAL NUMBER	LIFT #	TEST UNITS KSI	GAUGE LENGTH 2 INCH
NOMBRE DE SERIE	FARDEAU	DIR YIELD STRENGTH	ULTIMATE STRENGTH XELONG
		RESISTANCE A LA	RESISTANCE A LA
		D'ELASTICITE	ALLONG
		TRACTION	
T38095/00	4438607	T 63	74
			29.2 (%)

(*) - Method of elongation calculation: at fracture. / Methode de calcul de l'allongement: au point de fracture.

ArcelorMittal Dofasco G.P. as per John Duric - CHYL Supervisor
The Results Relate Only To The Items Tested
This Report Shall Not Be Reproduced Except In Full Without The Expressed Written Approval of The CHYL Supervisor.

This Contract Is Subject To The Terms And Conditions Of Sale Shown On The Order Acknowledgement.
Ce Contrat est Sujet aux Termes et Conditions de Vente Indiqués Sur l'Accuse de Reception de Commande.



DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. M1010-S	REV A SHEET 1 OF 1
DATE 01.06.13		TITLE 1010-1025 SHEET	SCALE NTS
A	01.06.13	NEW ISSUE	
A1	04.03.09 #47	ADD ASTM A1008 AND COLD ROLLED	

PURCHASE MATERIAL: AISI 1010-1025 OR ASTM A36 / A366 / A1008
OR CSA G40-21 38W / 44W / 50W / 60W / 70W
MINIMUM YIELD TENSILE STRENGTH = 28 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 42 KSI
COLD ROLLED

PART NUMBER: M1010-S | TT | GA WHERE TT = GAUGE THICKNESS
 GA
EG. 16 GAUGE STEEL = M1010-S16GA

RELEASED
01-06-15 #

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M10185.250

PO / BATCH NO.: P2041051/S115006

DATE: 18/10/01

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.250"

QUANTITY RECEIVED: 16sf

THICKNESS RECEIVED: 0.248"

QUANTITY INSPECTED: 16sf

SHEET SIZE ORDERED: 4'x4'

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: 4'x4'

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	CSA G40-21 50L
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	MT: 154894
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="radio"/> N <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



North American Stainless Canada Inc.
740 Imperial Road North
Geoph, ON N1K1Z3
Canada

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 371391 15 Bill To:

Customer: 007080 003

Ship To:

Date: 1/15/2018 Page: 1

Steel: 304/304L

Finish: CD

Your Order: M06001

NAS Order: IN 0257533 07 Heat Treat Code: 44,760

Corrosion: ASTM A262/15 Prac A/N OK

PRODUCT DESCRIPTION:

Round Bar, Annealed, Co24 Draw
UNS J0400/30403 IN 10204 3.1, ASTM A264/16
ASTM A276/17, ASTM A479/17, ASTM A192/16a CHEN CHLX,
ASTM A479/13, ASTM A192/13 CHEN CHLX
AMS 5639J, AMS 5647L, AMS Q08-763D, Q08-763P, ASTM F899/12b
SOLUTION ANNEAL, TEMP 1900F MIN, ASTM A320/17a CL 1 OR B8
ASTM A193/16-AMS A193/13 CL 1 OR B8

REMARKS:

COMPLIES WITH REQUIREMENTS OF DPAN 252.225-7009 IN DIRECTIVE
2011/65/EU, DASH. NAF-MOD-CC. NO WELD REPAIR. MELTED AND NFO
IN USE FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product ID	Size & Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
AJ2037 7	.7500		906	144.00	9	1	

CHEMICAL ANALYSIS							
CM(Country of Mkt)				Lab Accreditation Bureau, ISO/IEC 17025, Certified 12323			
ES(Spain)				US(United States) ZA(South Africa) JP(Japan)			
Chemical Analysis per ASTM A751/14a							
644D	CH	C %	CO %	CR %	CU %	NI %	SI %
	US	.028	.17	18.10	.40	1.38	.310
							.084
							8.53
							.030

MECHANICAL PROPERTIES							
Product ID	1 d	2 d	3 d	4 d	5 d	6 d	7 d
AJ2037 7							
	RL	193.0	.78.22	104.16	69.59	42.23	

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

KRIS LARK

1/15/2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR
(NOTE: AISI 303 NOT ACCEPTABLE)

1/8" SPECIFICATION

PART NUMBER

ASTM A278

M304R/D DDUI
DIA. 1

WHERE "D.DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M304R0.750

RELEASED
9/15/25

1	REFORMAT DWG. ADD SPECS (2N D6 1)	09.07.15
A	NEW ISSUE	08.03.13
REV	DESCRIPTION	DATE
DESIGN	AJS	
DRAWN	GA	
CHECKED		
MFG. APPR.	M304R	
APPROVED		
DE APPR.		
DATE	09.07.15	
DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA		
REV. B		
SHEET 1 OF 1		
SCALE		
NFS		
COPYRIGHT © 2008 BY DART AEROSPACE LTD		

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R0.750
 DATE: 18/10/01

PO / BATCH NO.: P0041051/5115007

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12ft
 QUANTITY INSPECTED: 12ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.750"
 THICKNESS RECEIVED: 0.750"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	<u>A57M A276</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	<u>LT. 6440</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="radio"/> N <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/01</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



TEL: (416)745-4444 FAX: (416)745-0925 1-800-668-7210
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4
<http://www.extrudex.com>

MILL TEST

BILL TO	S765 CERT CODE: 9		DIE NUMBER	DATE OF SHIPMENT	EXTRUDEX ORDER NO.	MANIFEST NO.
SHIP TO	1532 CUSTOMER PO C76056		S 7238	Sep/12/2018	221014 - 10	397777
SO DESCRIPTION	CUSTOMER PART NUMBER V836541		ALLOY 6061	SALESMAN PETER BASHMAKOV	MADE IN CANADA	
1"X2" FLAT BAR	PART DESCRIPTION 1"X2" FLAT BAR		CERTIFICATION ASTM B221-14 AMS QQA 200/8			
			SPECIFICATION Samuel std shapes			

Mechanical Properties

Lot	Alloy	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation	Hardness Rockwell F	Conductivity
A.11	6061	Sep/10/2018	45.60	41.80	15.70	90.2, 89.6, 89.9	

Chemical Composition

Cast Number	Lot	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Al	Ga	V	B	Zr	Pb	Sn	Sr	Co	Al	Other
73242	A.11	6061	0.645	0.223	0.211	0.101	0.997	0.067	0	0.036	0.025	0	0	0	0	0	0	0	0	0	0

We certify that the following extrusions have been quality inspected/tested and conforms to required dimensional and temper specifications.

Grant Jardine
Plant Manager

1 - CUSTOMER COPY

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL (6061) T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION:
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ~~ASTM B221~~

PART NUMBER: M6061T6B T.TTT X WW.WWW
THICK WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES
"WW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED
2009-09-03
MAD

B REMOVE QQ-A-250/11 OPTION REFORMAT NOTITS ADD		C.P.		09 (7 1)	
ASTM B211/B221 (2N D7-1)		DS		01 06 06	
A NEW ISSUE		BY		DATE	
REV		DESCRIPTION			
DESIGN		DS		DART AEROSPACE LTD	
DRAWN		AS		HAWKESBURY, ONTARIO, CANADA	
CHECKED		AS		REV B	
MFG APPR		M6061T6B		DRAWING NO	
APPROVED		M6061T6B		SHEET 1 OF 1	
DE APPR		M6061T6B		SCALE	
DATE		09.07.13		NTS	
COPYRIGHT © 2001 BY DART AEROSPACE LTD					

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M 6061 T6 61.000 x 2.000

PO / BATCH NO.: P0041051 / 5115008

DATE: 18/10/01

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 1.000"

QUANTITY RECEIVED: 48ft

THICKNESS RECEIVED: 1.000"

QUANTITY INSPECTED: 48ft

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	<u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u> N	AMS QQA 200/B
CORRECT THICKNESS	<u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u> N	LT: 73242
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.

RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 1B INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

KAISER ALUMINUM FABRICATED PRODUCTS

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

CUSTOMER PO NUMBER: 5400388111-1		CUSTOMER PART NUMBER: ALREC00220	PRODUCT DESCRIPTION: 1.500 X 3.500 SC RECT BAR		
KAISER ORDER NUMBER: 6047900	LINE ITEM: 001	SHIP DATE: 02/27/2018	KAISER LOT NUMBER: Z00114141	ALLOY: 6061	TEMPER: T6511
WEIGHT SHIPPED: 15418.000 LB	QUANTITY: 208.000 PCS	B/L NUMBER: 621970	DIAM/DAF/THKNS: 	WIDTH: 	LENGTH: 12.000 FT
SHIP TO:			SOLD TO:		

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z00114141	0001	0001	48.7	44.6	16.2	RE 93	N/A	N/A
Z00114141	0001	0002	50.7	46.4	13.6	RE 92	N/A	N/A
Z00114141	0001	0003	49.8	45.7	13.5	RE 91	N/A	N/A
Z00114141	0001	0004	45.8	41.8	17.1	RE 93	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
108213	.62	.26	.24	.07	.86	.06	.03	.02	.00	.00	.00	.01	.04

Applicable Requirements:

ASTM-B221-14 STENCILED ASME-SB221 2009 SECT II AMS-QQ-A-200/8A UNS#A96061 (T6511 also conforms to T6-not applicable to other tempers)

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILITZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Aimee L. Macnowski, Quality & Technology Manager

Aimee L. Macnowski

Plant Serial: 00323823
Kaiser Order Number: 6047900
Line Item: 001

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6511/T62 ALUMINUM BAR

SPECIFICATION:
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221

PART NUMBER: M6061T6B T.TTT X | WWW.WWW |
THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES
"WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1 000X12 000

RELEASED
R 2009-05-03

B		REMOVE QQ-A-250/11 OPTION REFORMAT NOTES AND ASTM B211/B221 (ZM D7-1)		CP	09 (7 1)
A		NEW ISSUE		DS	01 06 08
REV		DESCRIPTION		BY	DATE
DESIGN	DS	DART AEROSPACE LTD			
DRAWN	DS	HAWKESBURY, ONTARIO, CANADA			
CHECKED	DS	DRAWING NO.			
MFG. APPR.	DS	M6061T6B			
APPROVED	DS	TITLE			
DE APPR.	DS	6061-T6 BAR			
DATE	09.07.13	SHEET OF 1			
		SCALE			
		NTS			
COPYRIGHT © 2001 BY DART AEROSPACE LTD					

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061 T6 B1500x3.500
 DATE: 18/10/01

PO / BATCH NO.: P0041051/5115204

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6 ft
 QUANTITY INSPECTED: 6 ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.500"
 THICKNESS RECEIVED: 1.500"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	ASTM B221
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	MT 200114141
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/01</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

CERTIFIED INSPECTION REPORT

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

S. N. Srinivasan
 Nandu Srinivasan
 Manufacturing Director - Davenport & Stediles

Terrance Thon
 Quality Assurance Manager

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

3590874

Ship Date

2018-08-24

B.L. No. 11843005

Invoice No. 00000

Arconic No. 1001008628-1

Item DP-08628-1

P.O. No./Govt Contract No. Customer

U10868 In#: 1

Arconic Item

IT G041015423R19 3B8

Page 1 of 2

Ship To:

Item Description
 0.08" IN TK (+0.0000 - .0045) X 48.0" IN W (+.125 - .125) X 144.0" IN LN (+.15625 - .15625) CAT D 126901 (N) A/T 6061
 (T6) FLAT SHEET FOR DISTRIBUTORS TOLERANCE
 GUARANTEED. AMS4027/REV N ANS1H35.2 REV 2017 EXC MERK ASME-SB-209 REV 15 EXC MERK (ASTM B209) REV 14 ((MARKED)) XRAFT PAPER INTERLEAVED
 MAX GROSS SKID WGT: 4750 LB QUAN TOL +/- 25 % CQR D126901 REV 47 CUST REQ 18-05-01 *** W/E 18-09-01 ***

Num	Package Ticket	Lot	Weight	Quantity	DOM	Inspector	Clock Numbers
1	502629	427791	3908	75	PC	47397	27908

Notes for CQR: D126901.47
 PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS4027 REV N ALSO MEET THE REQUIREMENTS OF AMS-QQ-A-250_11 ORIGINAL REVISIO N DATED 1997-08-01.

CQR: D126901.47 -Specification Limits

Temp	Dir	Long Transv.	Max	Min
T6	UTS	KSI	UTS	EL4D
			KSI	PCT
			42.0	35.0
			10	10

Chemical Composition

Alloy	6061	Lot: 427791	SI	FE	CU	MN	MG	CR	ZN	TI	Other
			Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	Each
			Min	0.40	0.15	0.15	0.8	0.04	0.15	0.05	Total
											Aluminum
											0.15
											REMAIN

Temp	Dir	Long Transv.	Test	10
T6	No->	UTS	KSI	42.8
		EL4D	PCT	12.8
				12.8

CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

3580874

Ship Date

2018-08-24

B.I. No.

11843005

Invoice No.

00000

Arconic No.

1001008628-1

Item

Arconic Item

DP-08628-1

P.O. No./Govt Contract No.

UL0868

Int#: 1

SAMUEL SON & CO LT

G041015423R19

GB8

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material meet the composition limits and had the mechanical properties shown on the face of this report. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious or otherwise fraudulent statements or omissions on this certificate by any recipient may be punished as a felony under applicable law.

Terrence Thom
Quality Assurance Manager

Nanda Simvason
Manufacturing Director - Davenport & Satellite

Page 2 of 2

Lot: 427791 - Mechanical, Physical, Metallurgy, Quantometer Results (cont.) -----



Cast Number: H3250021
Chemical - OBS SI ✓ FE ✓ CU ✓ MN ✓ MG ✓ CR ✓ ZN ✓ TI ✓ Other Each Other Total
Actuals 0.65 0.4 0.28 0.05 1.0 0.15 0.02 0.04 < 0.05 < 0.15

This material was melted in the United States or a Qualifying Country (REF DFARS 225.872.1(a)); it was manufactured in the United States

SPECIFICATION CONTROL DRAWING

△ PURCHASE MATERIAL: 6061-T6/T62/T651 ALUMINUM SHEET OR PLATE
SPECIFICATION: QQ-A-250/11 OR AMS-QQ-A-250/11
OR ~~AMS-4025~~ OR 4027
OR ~~ASTM B209~~

△ PART NUMBER: M6061T6S XXX' X' W.WWW'
THK' WIDTH'

WHERE "XXX" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)
EG. 0.063" THICK SHEET = M6061T6S.063
EG. 3.5" WIDE BY 0.500" THICK PLATE = M6061T6S.500X3.500
XXX BY 4FT BY 8FT FOR SHEET

△ PREFERRED SIZE:

C	ADD PLATE AND T651 S/H (C)	MI	17 12 13
B	REFORMAT DWG. ADD B209 SPEC (ZN DB-1)	CP	08 07 13
A	NEW ISSUE	RF	01 08 08
REV	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	ML		
CHECKED	NO		
MFG. APPR.	JFS		
APPROVED	HS		
DE APPR.	CP		
DATE	17.12.13		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	M6061T6S
SHEET 1 OF 1	REV. C
TITLE	6061-T6 SHEET/PLATE SPEC
SCALE	NTS
COPYRIGHT © 2004 BY DART AEROSPACE LTD	

APPROVED
2018 MAR 13
EJ 18-005

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061T65.080
 DATE: 18/10/01

PO / BATCH NO.: P0041051/5114804

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 96sf
 QUANTITY INSPECTED: 96sf
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.080"
 THICKNESS RECEIVED: 0.080"
 SHEET SIZE ORDERED: 4'x12'
 SHEET SIZE RECEIVED: 4'x12'

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	ASTM B209
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	MT: 427791
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/01</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SBF 375 3.000 SE 304L



PHOENIX TUBE COMPANY, INC.
Manufacturer of Stainless Ornamental and Structural Tubing



CERTIFICATION OF TEST

SOLD TO:

SHIP TO:

II

CUSTOMER'S ORDER #: V83642
DATE SHIPPED: 5/22/2014
SIZE: 3" x 3/8" HRAP
SOURCE: USA D
VENDOR: MAG

OUR ORDER#: 334684
QTY SHIPPED: 1135.00
GRADE: 304
HEAT#: L1E7
TEST REPORT#: TR011881

NO WELD BAR
L5E7
DATE: 02/28/2014

SPECIFICATION:

CHEMISTRY THIS COLUMN:

ASTM A276-18
ASME SA276-13 COND. A
ASTM A479-13
ASME SA479-13
QQ-S-783F, COND A
QQ-S-786D, COND. A

ASTM A282-13, PRACTICE
CORROSION OK, HRAP
ASTM A484-13
ASME SA484-13
NO WELD REPAIR
EN 10204 2.2

ASTM A240-13
ASME SA240-13
MIL-STD-883C AMEND 3
AMS 8838H & AMS 8847J
ASTM A480-13
ASME SA 480-13

TYPE 304U/304 DUAL CERTIFIED
UN90 30400 / 30403
ASTM A886-10
AMS 8865H/AMS 88513J
NACE MR0175/01 / MR0103

MERCURY IS NOT USED BY US AS AN ALLOYING MATERIAL. NOR IS METALLIC MERCURY HANDLED IN THE VICINITY OF OUR PROCESSING LINES. WE ARE NOT PRESENTLY AWARE OF ANY MERCURY CONTAMINATION. MATERIAL HAS BEEN HEATED TO A MINIMUM OF 1800 DEG. F AND IS SUBSEQUENTLY COOLED RAPIDLY TO PREVENT CARBIDE PRECIPITATION

CHEMICAL ANALYSIS

C	MN	P	S	SI	CR	NI	MO	CU	CO	N2	TI
.017	1.74	.09	.001	.28	16.02	9.08	.33	.45	0	.00	0

PHYSICAL

HARDNESS	YIELD		TENSILE		PERCENT EL		PERCENT RA
	PSI	MPA	PSI	MPA			
RB 98	32410	0	90740	0	62		71

THE CHEMICAL ANALYSES ARE CORRECT AS CONTAINED IN OUR CORPORATE RECORDS.
PHYSICAL PROPERTIES ARE DETERMINED WHILE MATERIAL IS IN STRIP FORM.

Melted & Manufactured in the USA PAR BAA complies, DFARS BAA complies, FAR TAA complies

CERTIFIED BY Quality Control Dept.

Thomas Ugras

1185 WIN DR. - BETHLEHEM, PA. 18017 - (610) 865-5337

Fax Number: 610-865-4073

Q.C. REVIEWED	
DATE	INITIAL
5/28/14	JA

SPECIFICATION CONTROL DRAWING

△ PURCHASE MATERIAL: AISI 304/316 SS BAR OR AISI 304/316 SS PLATE
(NOTE: AISI 303 NOT ACCEPTABLE)

△ SPECIFICATION: ASTM A276 OR ASTM A240
PART NUMBER: M304B | T.TTT | X | WWW.WWW |
| THICK | | WIDTH |

WHERE "T.TTT" = THICKNESS IN INCHES
AND "WWW.WWW" = WIDTH IN INCHES

△ EG: 0.5" x 3.0" BAR = M304B0 500X03 000
EG: 0.5" x 12.0" PLATE = M304B0 500X12 000

RELEASED
2010-11-30

C	ADDED PLATE TO PURCHASE MATERIAL. ADDED PLATE RELATED SPECIFICATIONS, AND EG. CHANGED TITLE FROM "304/316 BAR" TO "304/316 BAR/PLATE"	MB	10.11.25
B	REFORMAT DWG. ADD SPECS (ZN D6-1).	CP	09.07.15
A	REF PAR D8-020A	PH	05.08.10
REV	NEW ISSUE	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG APPR			
APPROVED			
DE APPR			
DATE	10.11.25		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. C
M304B	SHEET 1 OF 1
TITLE	SCALE
304/316 BAR/PLATE	NTS
COPYRIGHT © 2003 BY DART AEROSPACE LTD	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304B0.375x03.000

PO / BATCH NO.: P0044051/S15010

DATE: 18/10/01

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.375"

QUANTITY RECEIVED: 1254

THICKNESS RECEIVED: 0.375"

QUANTITY INSPECTED: 1254

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> N	ASTM A276
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	MT: 7567
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____		
DATE: <u>18/10/01</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



**MILL TEST CERTIFICATE
(INSPECTION CERTIFICATE)**
In Accordance with EN 10204 :2004 Type 3.1

Jindal Stainless (Hisar) Limited,
Hot Rolling Division

CUSTOMER : EXCEL STAINLESS LLC	CERTIFICATE NO. : JSHI-HRD/QA/2018-19/ER/00001055
CITY : WARRENVILLE IL	DATE : 25.06.2018
QA NO : 096-I-LP	NET WT(Lbs) : 7061.601
SALES ORDER NO. : 3500040216	COMMERCIAL INV. NO. : H20181980099
PROFORMA INVOICE NO. : 6100024406	DATE: 25.06.2018

Material Description/Product STAINLESS STEEL COLD FINISHED ROUND BAR	Material Specification ASTM A 276/A 276M - 2017/ASME SA 276 SRC PART A - 2017	Process-Route EAF-AODVOD-LRP. CCS/INGOT	Dimension Tolerance specification As per GMP Agreement
--	---	---	---

SR NO	BATCH NO	PACKET NO	WEIGHT (Lbs)	NO OF PCS	HEAT NO	GRADE	DIA SIZE (inch)	NOML LENGTH (inch)	FINISH	QUALITY
1	1805AR6199	1805AR6199	1338.204	418	1805J1047	304L/304	0.313	144.000	CD	PRIME
2	1802AR4796	1802AR4796	1210.336	265	1802J1105	304L/304	0.375	144.000	CD	PRIME
3	1710AR4846	1710AR4846	1199.313	262	1710J4384	304L/304	0.375	144.000	CD	PRIME
4	1710AR4847	1710AR4847	1170.653	256	1710J4384	304L/304	0.375	144.000	CD	PRIME
5	1805AR6532	1805AR6532	1210.336	148	1805J1059	304L/304	0.500	144.000	CD	PRIME
6	1804AR6949	1804AR6949	934.759	51	1804J1172	304L/304	0.750	144.000	CD	PRIME

SR NO	HEAT NO	GRADE	C%	Mn%	S%	P%	Si%	Ni%	Cr%	N%	Mo%	Cu%	Ti%	Nb/Cb%	Al%
1	1805J1047	304L/304	0.023	1.34	0.025	0.038	0.35	8.06	18.65	0.021					
2	1802J1105	304L/304	0.017	1.55	0.029	0.031	0.40	8.12	18.03	0.082					
3	1710J4384	304L/304	0.021	1.61	0.029	0.039	0.37	8.02	18.15	0.070					
4	1710J4384	304L/304	0.021	1.61	0.029	0.039	0.37	8.02	18.15	0.070					
5	1805J1059	304L/304	0.025	1.58	0.022	0.037	0.40	8.03	18.23	0.072					
6	1804J1172	304L/304	0.021	1.55	0.025	0.037	0.36	8.05	18.09	0.070					

Sr No.	Packet/Batch No.	Dia Inrb	Rp 0.2/YS ksi	Rp 1.8/ksi	Rm/TS ksi	%EL A.2 inch	%EL max. min. inch	Hardness B/HN	%RA	TEST RESULTS
1	1805AR6199	0.313	76.144	103.26	45			226		(1) Material solution annealed in accordance with requirements as laid in ASTM A 484/A 484M ED 2018 / ASTM SA 484/SA 484M SEC II PART A-17 (Table 2, Annealing Requirements). Material solution annealed at temperature 1050°C minimum, Soaking time 1/1 minute/min and followed by water quenching.
2	1802AR4796	0.375	72.808	102.39	45			207		(2) Material also conforms to ASTM A 479-17, CONDA (Chemically & mechanically), ASTM A 182-18 (Chemical only)
3	1710AR4846	0.375	71.358	103.12	45			219		(3) ROC test as per ASTM A 262 practice (E) and after exposure the specimens are bent (1710 degree) and inspected at magnification of 20X and found without any cracks.
4	1710AR4847	0.375	71.358	103.12	45			219		(4) Micro examination. Step structures per ASTM A 262 practice (A)
5	1805AR6532	0.500	68.312	98.915	47			226		(5) Grain Size as per E112-2013 and conforms to ASTM No. 4 or Finer
6	1804AR6949	0.750	67.852	99.350	47			213		(6) No weld repair has been done on product.

(7) Above material conforms to requirements as per NACH NR 0173 / ISO 15516-3 : 2015 / MR 0163 / ISO : 17945 : 2015

(8) Dimension tolerances as per ASTM A 484/A 484M-18

(9) 100% bars were checked for Phl testing by XRF and found satisfactory.

(10) Gauge length 40.

under FINISH column CD stands for COLD DRAWN

MILL TEST CERTIFICATE - PART 3 OF 4

Buyer / Customer PO No. BN46091

The material supplied under this Test Certificate is free from any defective contamination as checked by procedures established by Jindal Stainless (Hisar) Limited as per the relevant standards provided by AERB

Jindal Stainless (Hisar) Limited,
Hot Rolling Division,
C/O: Jindal Mary, HISAR-151003 (HRA),
TEL: +91-1662-222671-81,
FAX: +91-1662-350996, 150496
Email: sales@jssl.co.in

Formal Ref: 3500040216-REV NO 01, P/1 Date: 15/09/2018

Any unauthorized copy of this Test Certificate is/are null and void.

This is hereby certified that the material was examined, tested, analyzed & inspected in accordance with requirements of the material specification, SMO and has been found to meet these requirements.

QA/ISO 9001:2015
CERTIFIED COMPANY

Document Digitally signed by Anil Mahra (Hisar) Limited
Date: 28 June 2018 11:59
AUTHORISED SIGNATORY
QUALITY ASSURANCE DEPT

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL AISI 304/316 SS ROUND BAR
(NOTE: AISI 303 NOT ACCEPTABLE)

SPECIFICATION:

PART NUMBER

ASTM A276

M304R 0.0001
DIA. 1

WHERE "D.DDD" = DIAMETER IN INCHES

EG 0.75" ROUND BAR = M304R0 750

RELEASED
R 01/03/23/147

B	REFORMAT DRWG. ADD SPECS (7N D2 '1)	C.P.	09 07 '15
A	NEW ISSUE	AJS	08 03 03
REV	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	GA		
CHECKED	GA		
MFG APPR	M304R		
APPROVED	GA		
DE APPR	GA		
DATE	09.07.15		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
REV. B			
DRAWING NO.			
M304R			
TITLE			
304/316 ROUND BAR			
SCALE			
NTS			
COPYRIGHT © 1988 BY DART AEROSPACE LTD			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304 R0.375
 DATE: 18/10/01

PO / BATCH NO.: P0041051/5115011

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 125+
 QUANTITY INSPECTED: 125+
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375"
 THICKNESS RECEIVED: 0.375"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	N	
CORROSION	Y	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	N	ASIN A276
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N	HT: 1802AR4796
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u>	SIGNED OFF BY: _____
DATE: <u>18/10/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

METALLURGICAL

TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

214108

Certificate: 419932 3 Mail To:

Ship To:

Customer: 007060 001

Date: 6/14/2018 Page: 1

Steel: 303

Finish: CD

Corrosion:

Your Order: C114497

NAS Order: PN 0093987 01

Heat Treat Code: 47,254

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
UNS 30300, ASTM A582/12 EN 10204 3.1, ASTM A484/16
AMS 5640V TYPE 1, QQS-764B CONDITION A
SOLUTIONS ANNEAL TEMP 1900F MIN, ASTM F899/12b

REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE
2011/65/EU. ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BJ5704 1		.7500		1,126	144.00	3	1	

CHEMICAL ANALYSIS

CHEMICAL ANALYSIS												ANAB, ISO/IEC 17025, Certificate# L2323			
NAS Heat		CM(Country of Melt)			ES(Spain)		US(United States)		ZA(South Africa)		JP(Japan)		Chemical Analysis per ASTM A751/14a		
CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %						
819E	US	.029	.12	17.14	.29	1.92	.258	.041	8.54						
														.030	

MECHANICAL PROPERTIES

Product Id	1 d o i C F	HB	.2YS KSI	UTS KSI	RA %	Elng % 4D
BJ5704 1	R L	171.0	83.78	108.57	38.99	25.44

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

KRIS LARK

6/14/2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR
(NOTE: AISI 304/316 NOT ACCEPTABLE)

SPECIFICATION:

PART NUMBER:

ASTM A582
M303R0.750
DIA.

WHERE "D.DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M303R0.750

RELEASED
2010-02-02
NR

B	REFORMAT DWG. ADD SPECS (ZN 08-1).	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.01.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M303R			
REV. B			
SHEET 1 OF 1			
TITLE			
303 ROUND BAR			
SCALE			
NTS			
COPYRIGHT © 2001 BY DART AEROSPACE LTD.			
THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND NOT FOR ANY OTHER PURPOSES.			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303R0.750

PO / BATCH NO.: P0041051/S115012

DATE: 18/10/01

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.750"

QUANTITY RECEIVED: 125t

THICKNESS RECEIVED: 0.750"

QUANTITY INSPECTED: 125t

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTM A582
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	HT: 819E
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in